

### **REMARKS**

Claims 1-3 and 6-15 are currently pending. Claims 1 and 13-15 have been amended. Applicant reserve the right to pursue the original claims and any other claims in this application and any other application.

Claims 4 and 5 have been cancelled and the limitations thereof incorporated into amended claim 1. No new matter has been added or new issues raised.

Claims 1 and 13-15 stand rejected under 35 U.S.C. 112, as failing to comply with the written description requirement. Although applicants respectfully disagree, claims 1 and 13-15 have been amended to expedite the prosecution of this case. No new matter has been added.

Claims 1, 6/1, 7, 8, 10/1, 11/1, 12/1, 13, 14, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (U.S. Patent No. 6,608,914) ("Yamaguchi") in view of Lu et al. (U.S. Patent No. 5,550,928) ("Lu"). The rejection is respectfully traversed.

Claim 1 recites, inter alia, "A living body identifying device comprising: a living body information imaging means for imaging living body information; a registration data storage means for storing a registration data; an identifying means for identifying the living body information thus imaged with the registration data, comprising: an optimization candidate data extracting means for extracting an optimization candidate data for data renewal from the imaged living body information when the living body information is identified; an optimization candidate data storage means for accumulating a plural of said optimization candidate data extracted by said optimization candidate data extracting means when a renewal time comes or a renewal request is made; a renewal storage means for newly storing data having high priority as

new registration data from the plural of optimization candidate data accumulated in said optimization candidate data storage means and the registration data stored in said registration data storage means, thereby renewing the registration data when after a renewing request has been made; an error rate calculating means for calculating an error rate of imaging living body information, a registration data renewal target person extracting means for extracting registration data necessary to be renewed on the basis of the error rate calculated by said error rate calculating means; said error rate calculating means comprising: a circuit for maintaining: a first threshold value used for identification, a second threshold value set to be lower than the first threshold value, and an error value, wherein said error value is not more than the second threshold value."

Yamaguchi discloses an apparatus for recognizing a person. Referring to Fig. 1, the apparatus 10 includes a feature extracting section 12 that extracts a personal feature as a set of vectors. In cooperation with a subspace calculation section 14, the set of vectors is used to construct a correlation matrix, the correlation matrix is used to construct a set of eigenvectors which forms the basis of a subspace. (See Yamaguchi, column 5, lines 15-63.) The apparatus 10 further includes a recognition section 16, which is coupled to a registered information holding section 18 and a registered information updating section 20. Significantly, Yamaguchi discloses that for a given person, multiple subspaces may be stored. For example, subspaces corresponding to a person wearing glasses or having make-up applied, and the same person not wearing glasses or not having make-up applied may be stored in respective subspaces. (See Yamaguchi Fig. 6(a)). Additionally, multiple subspaces over time may also be stored for a same person. (Yamaguchi Column 7, lines 54-57; Fig. 7). Even subspaces corresponding to other people may be associated together. (Yamaguchi Column 7, lines 58-63.)

Yamaguchi fails to disclose, inter alia, "an optimization candidate data storage means for accumulating a plural of said optimization candidate data extracted by said optimization candidate data extracting means when a renewal time comes or a renewal request is made." Nor does Yamaguchi disclose, inter alia, "said error rate calculating means; said error rate calculating means comprising: a circuit for maintaining: a first threshold value used for identification, a second threshold value set to be lower than the first threshold value, and an error value, wherein said error value is not more than the second threshold value."

Lu discloses an audience measurement system, "a passive identification apparatus for identifying a predetermined individual member of a television viewing audience in a monitored viewing area, a video image of a monitored viewing area is captured. A template matching score is provided for an object in the video image. A Eigenface recognition score is provided for an object in the video image. These scores may be provided by comparing objects in the video image to reference files. The template matching score and the Eigenface recognition score are fused to form a composite identification record from which a viewer may be identified. Body shape matching, viewer tracking, viewer sensing, and/or historical data may be used to assist in viewer identification. The reference files may be updated as recognition scores decline." (Lu, Abstract)

Lu fails to disclose, inter alia, "an optimization candidate data storage means for accumulating a plural of said optimization candidate data extracted by said optimization candidate data extracting means when a renewal time comes or a renewal request is made." Nor does Lu disclose, inter alia "said error rate calculating means; said error rate calculating means comprising: a circuit for maintaining: a first threshold value used for identification, a second threshold value set to be lower than the first

threshold value, and an error value, wherein said error value is not more than the second threshold value.”

Moreover, although the Office provides the unsupported suggestion to combine the two references to achieve the claimed invention, applicants respectfully disagree and note that there is no motivation provided in either of Lu or Yamaguchi to combine the teachings of the two references together to attain the claimed invention.

As such, Yamaguchi either separately or in combination with Lu, fails to disclose the claimed invention, and the rejection of claim 1 should be withdrawn.

Claims 6/1, 7, 8, 10/1, 11/1, 12/1, 13, 14, and 15 depend, directly or indirectly, from claim 1 and should be allowable for at least the reasons noted above.

Claims 4/1 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and Usui (U.S. Patent No. 5,210,797). These rejections are respectfully traversed.

Claims 4 and 5 have been cancelled and the elements incorporated into claim 1. Claim 1 is allowable for at least the reasons noted above.

Usui discloses a method and apparatus for fingerprint recognition that operates by subsequently storing fingerprint patterns with higher rates of correspondence in place of fingerprint patterns already stored having low rates of correspondence. (Usui, Abstract) Furthermore, Usui discloses (Usui, col. 2, lines 18-35)

As noted in the Office Action, neither Lu nor Yamaguchi disclose “an error rate calculating means for calculating an error rate of imaging living body information”

nor a "a first threshold value...a second threshold value...and an error value." As such, the rejection of claim 1 (which incorporates the elements of claims 4 and 5) should be withdrawn.

Additionally, Usui fails to disclose "an error rate calculating means for calculating an error rate of imaging living body information" or a "a first threshold value...a second threshold value...and an error value."

To the contrary Usui teaches a using a comparison, where a comparison is made between an inputted fingerprint and stored finger print and an action is taken as a result of the comparison (depending on a pre-determined number of segments that are sought to be compared). (Usui, Col. 5, Lines 21-35).

As such, Yamaguchi, either separately or in combination with Lu and/or Usui, fails to disclose the claimed invention, and the rejection of amended claim 1 should be withdrawn.

Claim 9/1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Coffin (U.S. Patent No. 5,991,429) ("Coffin"). This rejection is respectfully traversed.

Claim 9 is dependant from claim 1 and should be allowable for at least the reasons noted above with respect to claim 1.

Additionally, Coffin discloses "A method and apparatus for identifying individuals for the purposes of determining clearance access or surveillance is characterized by enrolling an image of a person's face either voluntarily or secretly to be later used for comparison when the person voluntarily desires clearance or is covertly detected. The system can recognize or identify individuals regardless of

whether the individual is wearing eye glasses or attempted disguises. In one embodiment, the system allows an authorized operator to enroll an image of a person through a facial scan for subsequent clearance access. The system records the camera positioning, captures an image, scales the image and records data from a region of interest within the scanned image to a database for later comparison. Enrollment data and the corresponding image information are then associated with a personal identification number assigned to the person. Upon presentment before the system, and entering the assigned personal identification number, another facial scan is taken of the person to be compared with the data from the regions of interest from the enrollment database of images to confirm the identity of the individual. In a second embodiment, the system operator injects an image secretly taken of an individual for later surveillance and identification. In a surveillance mode, the system automatically detects a person's presence, positions the camera through analysis of the image, captures an image, and then processes the image to determine if the person is enrolled in the enrollment database." (Coffin, Abstract)

Yamaguchi, either separately or in combination with Lu and/or Coffin, fails to disclose, *inter alia*, "wherein the registration data has a predetermined number of imaging living body information, and said renewal storage means renews a prescribed number of imaging living body information from the predetermined number of imaging living body information." Moreover, there is no motivation to combine together the three references which dealing with different issues. There is certainly no teaching or suggestion in the references to the proposed combination. As such, the rejection of claim 9 should be withdrawn.

Claims 2, 6/2, 7, 8, 10/2, 11/2, and 12, 2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Igaki (JP 404320583A) (Igaki). These rejections are respectfully traversed.

Claim 2 is dependant from claim 1 and should be allowable for at least the reasons noted above with respect to claim 1.

As noted in the Office Action, neither Yamaguchi nor Lu disclose, inter alia, "a registration data renewal target person output means for outputting registration data to be renewed in accordance with the frequency of identification failure of said identifying means."

Additionally, Igaki discloses a system for updating fingerprint data. (Applicant notes that the Office has only supplied a English translation of the title and abstract of Igaki.)

Based on the teachings of the abstract, Igaki fails to disclose, either separately, or in combination with Yamaguchi and/or Lu, disclose, inter alia, "a registration data renewal target person output means for outputting registration data to be renewed in accordance with the frequency of identification failure of said identifying means."

Nor is there provided any motivation in Yamaguchi, Lu, Igaki to combine the references to attain the claimed invention. Nor has the Office provided any support that it would have been obvious to one with skill in the art to attain the claimed invention from the cited references. As such, the rejection of claim 2 should be withdrawn.

Claim 4/2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Igaki in view of Usui. This rejection is respectfully traversed.

Claim 4 has been cancelled and incorporated into claim 1. Claim 1 (4/2) is allowable for at least the reasons noted above with respect to claim 1.

Furthermore, Yamaguchi either separately or in combination with Lu and/or Igaki and/or Usui fails to disclose, inter alia, "an optimization candidate data storage means for accumulating a plural of said optimization candidate data extracted by said optimization candidate data extracting means when a renewal time comes or a renewal request is made." Nor does Yamaguchi either separately or in combination with Lu and/or Igaki and/or Usui disclose, inter alia, "an error rate calculating means for calculating an error rate of imaging living body information" nor a "a first threshold value...a second threshold value...and an error value." As such, the rejection of claim 4 should be withdrawn.

Claim 9/2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Igaki in view of Coffin. This rejection are respectfully traversed.

Claim 9/2 depends from claim 1 and should be allowable for at least the reason noted above with respect to claim 1.

Claim 9/2 depends from claim 2 and should be allowable for at least the reason noted above with respect to claim 2.



Claims 3, 6/3, 7, 8, 10/3, 11/3, and 12/3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Price-Francis (U.S. Pat. No. 5,815, 252). This rejection are respectfully traversed.

Claims 3, 6/3, 7, 8, 10/3, 11/3, and 12/3 depend from claim 1 and should be allowable for at least the reasons noted above with respect to claim 1.

Price-Francis discloses a "system for verifying that a card possessor is the authorized card owner compares scanned fingerprint data with fingerprint data encoded on an optical card. More than one of the person's fingerprints are encoded on the card, and the process of identification of the card possessor involves the random selection of separate fingerprints for scanning and comparison against the encoded fingerprints. A card reader/writer reads fingerprint characteristic information from an optical card inserted therein and a processing unit, connected to a fingerprint scanner and card reader/writer extracts from the scanned fingerprint certain well known indicators, and matches the recorded fingerprint characteristic data with the scanned fingerprint characteristics to establish identity therebetween." (Price-Francis, Abstract)

Price-Francis fails to disclose, inter alia, "a registration candidate data storage means for storing registration candidate unused for collation; wherein said renewal storage means also renews registration data stored in said registration candidate data storage means with the registration candidate data." As such, the rejection of claims 3, 6/3, 7, 8, 10/3, 11/3, and 12/3 should be withdrawn.

Nor is there provided any motivation in Yamaguchi, Lu, Price-Francis to combine the references to attain the claimed invention. Nor has the Office provided any support that it would have been obvious to one with skill in the art to attain the

claimed invention from the teaching of the cited references. As such, the rejection of claims 3, 6/3, 7, 8, 10/3, 11/3, and 12/3 should be withdrawn.

Claim 4/3 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Price-Francis and in view of Usui. This rejection is respectfully traversed.

Claim 4 has been cancelled and incorporated into claim 1 and is allowable for at least the reasons noted above with respect to claim 1.

Claim 9/3 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Lu and further in view of Price-Francis and in view of Coffin. This rejection is respectfully traversed.

Claim 9 depends from claim 1 and is allowable for at least the reasons noted above with respect to claim 1.

Claim 9 also depends from claim 3 and is allowable for at least the reasons noted above with respect to claim 3.

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In view of the above amendment, applicant believes the pending application is in condition for allowance.

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